

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
PERMITTING and COMPLIANCE DIVISION  
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(MPDES)**

**Fact Sheet/Statement of Basis**

Permittee:	Town of Twin Bridges
Permit No.:	MT0028797
Receiving Water:	Bayer's Ditch
Facility Information:	
Name	Domestic Wastewater Treatment Facility
Location	T 3S, R 6W, Section 22, Madison County
Facility Contact:	Sam Novich, Maintenance Operator P.O. Box 307 Twin Bridges, MT 59754 (406) 684-5243
Fee Information:	
Number of Outfalls	1 (for fee determination purposes)
Outfall – Type	001 – Minor POTW, lagoon with continuous discharge

## I. Permit Status

This is a renewal Montana Pollutant Discharge Elimination System (MPDES) permit for the Town of Twin Bridges domestic wastewater treatment facility. The previous permit was issued on August 1, 1994 and expired on June 30, 1999. The permittee submitted renewal fees in February 1999. A MPDES permit renewal application was received and deemed complete by the Department on October 9, 2002. Pursuant to the Administrative Rules of Montana (ARM) 17.30.1313, the expired permit remains effective until the renewed permit is issued.

The permittee submitted updated application forms, DEQ Form 1 and EPA Form 2A, on February 19, 2008.

## II. Facility Information

### A. Facility Description

The permittee operates a two-cell facultative lagoon system. The facility was originally constructed in 1963 and upgraded in 1990. One main lift station is used to pump wastewater to the lagoon facility. The collection system is gravity flow with two satellite lift stations.

The Operation and Maintenance (O&M; Damschen, 1990) manual submitted to the Department states that the facility can be operated in series or parallel operation. The O&M manual states that the lagoons were sized to provide 143 days of hydraulic detention time. The design plans on file at the Department state that the summer design flow is 71,300 gallons per day (gpd) and winter is 63,500 gpd. Discharge is continuous to Bayer's Ditch. The system is not equipped with effluent disinfection capability. Table 1 has facility design details.

The lagoon is equipped with a multi-level draw-off structure (Damschen, 1990), which allows the operator to discharge from one of three levels to optimize effluent quality. Discharge is measured using a v-notch weir and staff gauge.

In the updated application EPA form 2A, the permittee states that treated wastewater is "indirectly" land applied as a disposal method because water in Bayer's Ditch is used for flood irrigation. During the August 2008 MPDES compliance inspection, this statement was found to be incorrect. The permittee discharges treated wastewater at one location, the constructed lagoon outlet. Effluent is discharged to Bayer's Ditch, which is state water. Irrigation using state water is a beneficial use and is not associated with the wastewater discharge. This permit will not authorize the disposal of wastewater at any other location than that indicated in the original renewal application.

Great West Engineering completed a Preliminary Engineering Report (PER) for the permittee in April 2006. The PER outlined several treatment facility improvement options. The selected alternative includes the addition of a storage cell to the existing facility and land applying treated wastewater. The proposed land application configuration is a circular pivot coving 34 acres and is located about one-half mile east of the existing facility. A 200 foot buffer is proposed around the land application site.

The PER reported inflow and infiltration (I/I) rates and documented system improvements. In 2002-2003, monitored daily flows ranged from 80,000-90,000 gpd. The PER states that the permittee completed an I/I reduction project that reduced the daily average flow to 70,000 gpd by 2005.

<b>Table 1: Current Design Criteria Summary (Damschen and Associates, Inc, 1990)</b>	
Facility Description: <b>Two-cell facultative system; continuous discharge; no disinfection.</b>	
Construction Date: 1963	Modification Date: 1990
Design Population: 424	Current Population: 400 (2000 census)
Design Flow, Average (mgd): 0.0713 (summer), 0.0635 (winter)	Design Flow, Maximum Day (mgd): unknown
Primary Cells: 1	Secondary Cells: 1
Number Aerated Cells: 0	Minimum Detention Time-System (days): 143
Design BOD <sub>5</sub> Removal (%): unknown	Design BOD <sub>5</sub> Load (lb/day): 80.3
Design TSS Removal (%): unknown	Design TSS Load (lb/day): unknown
Influent Flow (mgd): 0.0475 – 0.0520	Source: Great West Engineering, 2006 PER
Collection System Combined [ ] Separate [X]	Estimated I/I: 250 gpcd (high water); 200 gpcd (Aug-May)
SSO Events (Y/N): unknown	Bypass Events (Y/N): unknown
Disinfection (Y/N): N	Type: NA
Discharge Method: continuous	

#### B. Effluent Characteristics

A summary of self-reported effluent quality is given in Table 2. The Period of Record (POR) is from January 2003 through May 2008.

The permittee did not have any effluent limit violations during the POR.

#### C. Compliance History

Three MPDES compliance inspections have been completed since December 2002 (December 17, 2002, October 18, 2007, August 13, 2008).

No permit violations were documented based on the December 2002 compliance inspection. The inspector collected an effluent sample and had it analyzed for five-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and nutrient species – nitrate plus nitrite as

nitrogen (N), total ammonia as N, total Kjeldahl nitrogen (TKN), total phosphorus as phosphorus (TP). The results are reported as follows:

BOD<sub>5</sub> = < 4 mg/L

TSS = 1.6 mg/L

Nitrate plus nitrite as N = 0.64 mg/L

Total ammonia as N = 3.83 mg/L

TKN = 6.18 mg/L

TN (Nitrate plus nitrite as N plus TKN) = 6.82 mg/L

TP = 1.60 mg/L

No permit violations were noted during the October 2007 compliance inspection. The inspector identified three areas that “could result in permit violation if not corrected”. These were: no record of a duly authorized signatory; record contents not maintained as required; and weed removal at lagoons. Further details contained in the inspection report are: a copy of the permit was not readily available; monitoring sample records, including quality assurance/quality control (QA/QC) records, were not maintained as required by the MPDES permit; lagoon dikes needed mowing and weed control; and the effluent structure was “weed choked” and needed to be cleaned.

The August 2008 compliance inspection focused on a facility site review and discussion of the proposed upgrades. No permit violations were observed during the site visit. The permittee stated that funding for the proposed upgrades has not been secured.

**Table 2: DMR Effluent Characteristics<sup>\*</sup>  
for POR January 2003 through April 2008**

Parameter	Location	Units	Previous Permit Limit	Minimum Value	Maximum Value	Average Value	Number of Samples
Flow, Daily Average	Effluent	mgd	<sup>1</sup>	0.0446	0.1210	0.0699	64
Biochemical Oxygen Demand (BOD <sub>5</sub> )	Influent	mg/L	<sup>2</sup>	ND	ND	ND	ND
	Effluent	mg/L	45/65 <sup>3</sup>	1.5	37	11.3	64
	Effluent	% removal	65 <sup>2</sup>	ND	ND	ND	ND
	Effluent	lb/day	<sup>4</sup>	0.67	23.0	6.7	64
Total Suspended Solids (TSS)	Influent	mg/L	No limit	ND	ND	ND	ND
	Effluent	mg/L	135/100 <sup>3</sup>	<1	70	12.7	64
	Effluent	% removal	No limit	ND	ND	ND	ND
	Effluent	lb/day	<sup>4</sup>	<0.4	38.6	6.9	64
Fecal Coliform Bacteria	Effluent	Number per 100 mL	<sup>5</sup>	ND	ND	ND	ND
pH (median value)	Effluent	s.u.	6.0-9.0	6.76	9.41	7.8	64
Temperature	Effluent	°C	<sup>5</sup>	ND	ND	ND	ND
Total Residual Chlorine	Effluent	mg/L	<sup>2</sup>	ND	ND	ND	ND
Total Ammonia as N	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
Total Kjeldahl Nitrogen	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
Nitrate + Nitrite as N	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
Total Nitrogen <sup>(7)</sup>	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
		lb/day	<sup>4, 5</sup>	ND	ND	ND	ND
Total Phosphorus as P	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
		lb/day	<sup>4, 5</sup>	ND	ND	ND	ND
Dissolved Oxygen	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
Oil and Grease	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND
Total Dissolved Solids	Effluent	mg/L	<sup>5</sup>	ND	ND	ND	ND

Footnotes:

ND – No data available

\* Conventional and Non-conventional Pollutants only, table does not include information on toxic pollutants.

1. No effluent limit in previous permit, monitoring requirement only.

2. Effluent limit but no monitoring required in previous permit.

3. Limit shown as 7-day average/30-day average.

4. Nondegradation load not calculated for previous permit.

5. No effluent limit or monitoring requirement in previous permit

### III. Technology-Based Effluent Limits (TBELs)

The Montana Board of Environmental Review has adopted by reference 40 CFR 133 which defines minimum treatment requirements for secondary treatment, or the equivalent, for publicly owned treatment works (POTW) (ARM 17.30.1209). Secondary treatment is defined in terms of effluent quality as measured by BOD<sub>5</sub>, TSS, percent removal of BOD<sub>5</sub> and TSS, and pH.

These requirements may be modified on a case-by-case basis for facilities that are eligible for treatment equivalent to secondary (TES) treatment (40 CFR 133.101(g)) or alternative state requirements (ASR) for TSS. To determine if a facility is eligible for TES the facility must meet the requirements of 40 CFR 133.101(g), summarized as follows:

- 1) The BOD<sub>5</sub> and TSS consistently achievable through proper operation and maintenance of the treatment works exceed the minimum effluent quality described for secondary treatment (40 CFR 122.102);
- 2) The treatment works utilize a trickling filter or waste stabilization pond; and
- 3) The treatment works utilizes biological treatment that consistently achieves a 30-day average of at least 65 percent removal (40 CFR 133.101(k)).

Water quality must not be adversely affected by the application of equivalent to secondary treatment. Effluent limits for BOD<sub>5</sub> cannot be relaxed unless the permittee has demonstrated that the relaxed limits will not result in a violation of water quality standards in the receiving water.

In addition to TES, permitting agencies may give special consideration to treatment works that employ waste stabilization ponds as the primary method for treating wastes. ASR may be incorporated into permits for lagoons if historic data for the system indicates that effluent limits based on TES cannot be achieved. The 30-day ASR for TSS in Montana is 100 mg/L [49 FR 37005; September 20, 1984]; the Department employed a 135 mg/L TSS for a 7-day limit based on best professional judgment. ASR limits may be incorporated as seasonal limits. New facilities must not be eligible for ASR.

The previous permit TBELs were limited to TES for BOD<sub>5</sub> and ASR for TSS (Table 2). For TSS, the previous permit did not require percent removal. Data provided by the permittee shows that the facility regularly meets national secondary standards for both BOD<sub>5</sub> and TSS. For the POR, two BOD<sub>5</sub> self-monitoring results exceeded the national secondary limit 30-day average of 30 mg/L (February 2005: 31.5 and March 2007: 37 mg/L). The 95<sup>th</sup> percentile of the POR BOD<sub>5</sub> data is 29 mg/L. Two TSS values exceeded the TES 30-day value for the POR (February 2004: 53 mg/L and April 2006: 70 mg/L). The 95<sup>th</sup> percentile of the data is 33.7 mg/L.

The permittee has not been required to collect and analyze influent BOD<sub>5</sub> water quality samples. The 2006 PER reports that the lagoon system BOD<sub>5</sub> removal in 2000 and 2001 averaged 92%. Low percent removal rates were reported as 89% in 2000 and 80% in 2001.

For the permit renewal, the BOD<sub>5</sub> effluent limits will be based on national secondary limits and TSS effluent limits will be based on TES. The percent removal of TSS will be 65% year round, as required by 40 CFR 133.105(b). The facility is equipped with a three-level draw-off for the operator to select the best effluent quality.

Compliance with TBELs is required at the last point of control. Dilution from ground water or any other water can not be employed to meet TBELs. The point of compliance for TBELs is at the v-notch weir into Bayer's Ditch.

ARM 17.30.1345 [40 CFR 122.45(f)(1)] requires that effluent limits must be expressed in terms of mass (mass/time), except for certain conditions, such as pH or temperature. For municipal treatment plants, mass-based limits are based on facility design flow (discussed in Part II) for the facility.

Mass based limits are calculated as follows:

$$\text{Load (lbs/day)} = \text{Design Flow (MGD)} \times \text{Concentration (mg/L)} \times \text{Conversion Factor (8.34)}$$

BOD:

$$30\text{-d} \quad \text{Load} = 0.0635 \text{ MGD} \times 30 \text{ mg/L} \times 8.34 = 16 \text{ lb/day}$$

$$7\text{-d} \quad \text{Load} = 0.0635 \text{ MGD} \times 45 \text{ mg/L} \times 8.34 = 24 \text{ lb/day}$$

TSS:

$$30\text{-d} \quad \text{Load} = 0.0635 \text{ MGD} \times 45 \text{ mg/L} \times 8.34 = 24 \text{ lb/day}$$

$$7\text{-d} \quad \text{Load} = 0.0635 \text{ MGD} \times 65 \text{ mg/L} \times 8.34 = 34 \text{ lb/day}$$

Table 3: Treatment Equivalent to Secondary Requirements¹				
Parameter	Units	Average Monthly Limit	Average Weekly Limit	Rationale
BOD₅	mg/L	30	45	40 CFR 133.102(a)
	lb/day	16	24	
	% removal	85 ²		
TSS	mg/L	45	65	40 CFR 133.105(b)
	lb/day	24	34	
	% removal	65 ²		
pH	s.u.	6.0-9.0 (instantaneous)		40 CFR 133.102 (c)
1. See Definitions section at end of permit for explanation of terms.				
2. The arithmetic mean of the values for BOD₅ and TSS for effluent samples collected in a period of 30 consecutive days shall not exceed 15% or 35%, respectively, of the arithmetic mean of the values for influent samples collected at approximately the same time during the same period (85% and 65%, respectively, removal).				

### Nondegradation

The permit does not authorize a new or increased discharge, as defined in ARM 17.30.702(18), and therefore is not subject to the criteria in ARM 17.30.715(1).

Load allocations are given in Table 4 for major constituents in the effluent. These allocations define baseline allocated loads for the facility. Any increase above this amount is subject to the provisions of Montana's Nondegradation Policy 75-5-303, MCA and ARM 17.30.705 *et seq.*

<b>Table 4: Calculated Allocated and Annual Actual Loads</b>						
<b>Parameter</b>	<b>Allocated Load (lb/day)</b>	<b>Actual 30-day Average Loads (lb/day)</b>				
		2003	2004	2005	2006	2007
BOD <sub>5</sub>	16	13.7	5.2	4.8	6.0	4.6
TSS	24	10.3	9.5	4.0	7.9	3.6

Baseline loads for BOD<sub>5</sub> and TSS were calculated using the design flow. The following equation was used to calculate BOD<sub>5</sub> and TSS nondegradation load allocations.

$$\text{Load (lbs/day)} = \text{Design flow (mgd)} \times \text{30-day average limit (mg/l)} \times 8.34 \text{ (lbs)(L)/(mg)(gal)}$$

BOD<sub>5</sub> Nondegradation Threshold Load Allocation:

$$\text{30-day BOD}_5 = 0.0635 \times 30 \times 8.34 = \underline{16 \text{ lbs BOD}_5/\text{day}}$$

TSS Nondegradation Threshold Load Allocation:

$$\text{30-day TSS} = 0.0635 \times 45 \times 8.34 = \underline{24 \text{ lbs TSS/day}}$$

BOD<sub>5</sub> and TSS discharge loads from self-monitoring data were calculated by the Department and are compared to the calculated nondegradation loads in Table 4.

#### IV. Water Quality- Based Effluent Limits (WQBELs)

Permits are required to include water quality-based effluent limits (WQBELs when technology-based effluent limits are not adequate to protect state water quality standards (40 CFR 122.44 and ARM 17.30.1344). ARM 17.30.637(2) states that no wastes may be discharged that can reasonably be expected to violate any state water quality standards. Montana water quality standards (ARM 17.30.601 *et seq.*) define both water use classifications for all state waters and numeric and narrative standards that protect those designated uses. New sources, as defined in ARM 17.30.703(16), are subject to Montana Nondegradation Policy (75-5-303, MCA) and regulations (ARM 17.30.701 *et seq.*).

##### A. Receiving Water

Wastewater is discharged from Outfall 001 to Bayer's Ditch, an irrigation ditch that can ultimately flow into the Jefferson River. The PER states that the main ditch does not return to the Jefferson River, but that a diversion off the ditch (downgradient of the wastewater discharge location) can flow to an oxbow slough of the Jefferson River. The ditch flows north of town for approximately four miles. Water reportedly flows year-round in the ditch, although winter flows



are significantly lower than during irrigation season. The PER states that ground water creates year round surface expression in Bayer's Ditch; however, the estimated PER low flow in is zero (Great West Engineering, 2006).

The receiving water is classified as B-1 according to Montana Water Use Classifications, ARM 17.30.610. Waters classified B-1 are to be maintained suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming, and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply.

Bayer's Ditch in the vicinity of the discharge is considered high quality water pursuant to Montana's Nondegradation Policy. Degradation of high quality water is not allowed unless authorized by the Department under 75-5-303(3), MCA.

Bayer's Ditch is located within the Jefferson River watershed as identified by the USGS Hydrological Unit Code (HUC) 10020005. A Montana stream segment identification number does not exist for the ditch. The ditch has not been included on any 303(d) list of impaired streams.

Well logs are available from the Montana Ground Water Information Center (GWIC) for the area around the proposed land application. Based on the well logs, ground water depth appears to be more than 30 feet below the ground surface. Stratigraphic descriptions show interbedded layers of clay and sand underlain by gravel. One well log classifies the geologic source as "alluvial fan deposits" (GWIC, 2008).

#### B. Mixing Zone

No effluent parameters require a mixing zone. Pursuant to ARM 17.30.505(1)(c), discharge from Outfall 001 is considered to be an existing source for the purposes of establishing mixing zone. The previous permit did not define a surface water mixing zone for the discharge. The permittee did not request or apply for a mixing zone. A mixing zone will not be granted in this permit.

#### C. Applicable Water Quality Standards

A discharge to surface water classified B-1 is subject to the specific water quality standards of ARM 17.30.623 (June 30, 2003). In addition, the general provisions of ARM 17.30.635 through 637, 640, 641, 645 and 646 apply unless they conflict with ARM 17.30.623 (ARM 17.30.603(3)). ARM 17.30.623(2)(b) and (h) incorporates by reference Department Circular DEQ-7 "Montana Numeric Water Quality Standards" (2006).

ARM 17.30.637(2) states that no wastes may be discharged that can reasonably be expected to violate any standard. Pollutants typically present in domestic POTW effluent that may exceed water quality standards include Oil and Grease, Escherichia coli (E. coli) bacteria, low levels of dissolved oxygen (DO), total residual chlorine when used to control pathogens, and/or total ammonia.

**Oil and Grease** – ARM 17.30.637 (1) gives general prohibitions to municipal discharges. State surface waters must be free from substances attributable to municipal discharges that will create visible oil film, or be present at or excess of 10 mg/L.

***Escherichia coli* (*E. coli*)** – The standard for *E. coli* for Bayer's Ditch applies year-round. The standards applicable to the receiving surface water are:

- 1) April 1 through October 31, of each year, the geometric mean number of the microbial species *E. coli* must not exceed 126 colony forming units (cfu) per 100 milliliters (ml), nor are 10% of the total samples during any 30-day period to exceed 252 cfu per 100 ml (ARM 17.30.625(2)(a)(i)); and
- 2) November 1 through March 31, of each year, the mean number of *E. coli* organisms should not exceed 630 cfu per 100 ml and 10% of the samples during any 30-day period may not exceed 1,260 cfu per 100 ml (ARM 17.30.625(2)(a)).

**Total Residual Chlorine** – DEQ-7 lists the chronic and acute standards for total residual chlorine as 0.011 and 0.019 mg/L, respectively.

**Total Ammonia as Nitrogen (N)** – Water quality standards for total ammonia as N are calculated based on receiving water temperature and pH. These data have not been collected and/or reported to the Department for the receiving water.

#### D. Proposed WQBEL/WLA

Permits are required to include water quality-based effluent limits (WQBELs) when technology-based effluent limits are not adequate to protect water quality standards (40 CFR 122.44, ARM 17.30.1344). ARM 17.30.1345 requires WQBELs to be developed for any pollutant for which there is reasonable potential (RP) for discharges to cause or contribute to exceedances of instream numeric or narrative water quality standards. The permittee has not collected effluent quality data for parameters other than the TBELs. Receiving water quality data are lacking.

**Oil and Grease** – The previous permit included an oil and grease narrative effluent requirement but did not require effluent monitoring. Quarterly monitoring for oil and grease will be required.

***Escherichia coli* (*E. coli*) Limits** – The facility does not have the capability to disinfect. The permittee was not required to collect pathogen data during the last permit cycle. Effluent monitoring is required with this permit issuance.

**Total Residual Chlorine** – The present facility does not have the capability to disinfect.

For Outfall 001, the total residual chlorine effluent limit will be 0.019 mg/L, should the permittee opt to upgrade to chlorine disinfection of the effluent. The effluent limit is the acute aquatic life standard and the limit meets the requirements of ARM 17.30.637(1), which states that discharges of pollutants cannot create concentrations that are toxic to aquatic life.

Analytical methods require chlorine samples to be analyzed immediately (40 CFR 136). Therefore, the permittee must analyze, on-site, total residual chlorine using a chlorine meter and approved method. The method must achieve a minimum detection level of 0.02 mg/l. Sampling of effluent with analytical results less than 0.02 mg/l is considered in compliance with the chlorine limit. If ultraviolet disinfection (UV) is utilized, final limits for chlorine will not apply.

**Total Ammonia as N** –The previous permit did not require effluent monitoring for total ammonia as N so reasonable potential for receiving water standard exceedances could not be calculated for permit renewal. Effluent monitoring for total ammonia as N is required.

**Whole Effluent Toxicity (WET) Limits** - ARM 17.30.637(2)(d) prohibits discharges to state waters that would create concentrations or combinations of materials which are toxic or harmful to human, animal, plant or aquatic life. The Department may require WET testing based on criteria listed in ARM 17.30.1322(4)(j), which includes permittees with design flows greater than 1 mgd, POTWs with pretreatment programs, or other instances including variability of pollutants based on the treatment, dilution of the effluent in the receiving water, and/or receiving stream characteristics, including possible water quality impairment.

The lagoon provides significant detention time for biological treatment. Its design flow is less than 1 mgd. No significant industrial contributors are known. WET testing is not necessary in this permit cycle.

#### V. Final Effluent Limits

Parameter	Units	Average Monthly Limit <sup>1</sup>	Average Weekly Limit <sup>1</sup>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	30	45
	lb/day	16	24
BOD <sub>5</sub> Removal	%	85	85
Total Suspended Solids (TSS)	mg/L	45	65
	lb/day	24	34
TSS Removal	%	65	65
Footnotes: 1. See Definition section at end of permit for explanation of terms.			

#### VI. Monitoring Requirements

##### A. Influent/Effluent Monitoring

Monitoring locations for influent will be after the last sewer hook-up and before discharge into the facultative cells. Effluent quality will be monitored at the v-notch weir, located in the effluent discharge control structure.

Monitoring Requirements – Outfall 001					
Parameter	Unit	Sample Location	Sample Frequency	Sample Type <sup>1</sup>	RRV <sup>2</sup>
Flow	mgd	Effluent	2/Week	Instantaneous	---
5-Day Biological Oxygen Demand (BOD <sub>5</sub> )	mg/L	Influent	1/Month	Composite	5
	mg/L	Effluent	1/Month	Composite	5
	% Removal <sup>3</sup>	NA	1/Month	Calculated	---
	lb/day	Effluent	1/Month	Calculated	---
Total Suspended Solids (TSS)	mg/L	Influent	1/Month	Composite	10
	mg/L	Effluent	1/Month	Composite	10
	% Removal <sup>3</sup>	NA	1/Month	Calculated	---
	lb/day	Effluent	1/Month	Calculated	---
pH	s.u.	Effluent	1/Month	Instantaneous	0.1
Temperature	°C	Effluent	1/Month	Instantaneous	---
<i>E. coli</i> Bacteria	cfu/100ml	Effluent	1/Month	Grab	1/100 mL
Oil and Grease <sup>4</sup>	mg/L	Effluent	1/Quarter	Grab	1
Total Ammonia, as N	mg/L	Effluent	1/Month	Composite	0.05
Nitrate + Nitrite, as N	mg/L	Effluent	1/Month	Composite	0.01
Kjeldahl Nitrogen, Total, as N	mg/L	Effluent	1/Month	Composite	---
Total Nitrogen, as N <sup>5</sup>	mg/L	NA	1/Month	Calculated	---
	lb/day	NA	1/Month	Calculated	---
Total Phosphorus, as P	mg/L	Effluent	1/Month	Composite	0.001
	lb/day	NA	1/Month	Calculated	---
Total Dissolved Solids (TDS)	mg/L	Effluent	1/Quarter	Composite	10
Dissolved Oxygen (DO)	mg/L	Effluent	1/Quarter	Instantaneous	0.05
Footnotes: 1. See Definition section at end of permit for explanation of terms. 2. The Required Reporting Value (RRV) is the detection level that must be achieved in reporting surface water or ground water monitoring or compliance data to the Department. The RRV is the Department's best determination of a level of analysis that can be achieved by the majority of the commercial, university, or governmental laboratories using EPA approved methods or methods approved by the Department. 3. See narrative discussion in this section of permit for additional details. 4. Use EPA Method 1664, Revision A: N-Hexane Extractable Material (HEM). 5. Calculated as the sum of Nitrate + Nitrite (as N) and Total Kjeldahl Nitrogen concentrations.					

VII. Special Conditions/Compliance Schedules

No applicable at this time.

VIII. Other Information

On September 21, 2000, a U.S. District Judge issued an order stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment (WQLS), the State is not to issue any new permits or increases under the MPDES program. The order was issued in the lawsuit Friends of the Wild Swan v. U.S. EPA, et al. (CV 97-35-M-DWM), District of Montana and Missoula Division. The renewal of this permit does not conflict with Judge Molloy's order because this is not a new or increased discharge under MPDES. The receiving water has not been listed as impaired.

IX. Information Source

Federal Regulations at 40 CFR, Parts 122, 133, 136.

Montana Statute, "Montana Water Quality Act", Title 75-5-101-605, Montana Code Annotated (MCA).

Administrative Rule of Montana (ARM) at:

- Mixing Zones in Surface and Ground Water (March 2006)
- Montana Surface Water Quality Standards. February 2006.
- Nondegradation of Water Quality. March 2006.
- 17.30.1201-1209, 17.30.1301-1387. Montana Pollutant Discharge Elimination System (MPDES). March 2006.

DEQ. Circular 7 Montana Numeric Water Quality Standards. February 2006.

Damschen and Associates, Inc. Operation and Maintenance Manual for Wastewater Treatment Ponds, Twin Bridges Montana. October 1990.

Great West Engineering. Preliminary Engineering Report (PER) prepared Wastewater System Improvements, prepared for Town of Twin Bridges. April 2006.

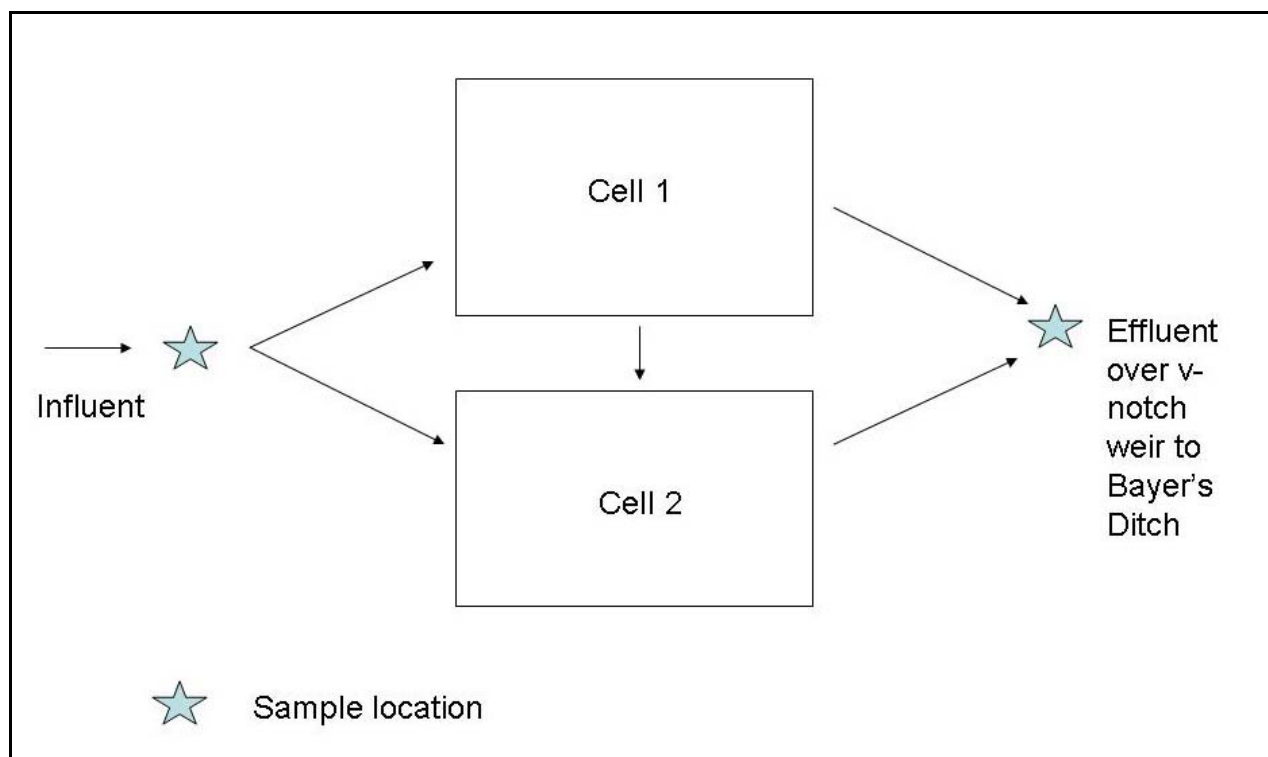


Figure 1: Facility flow-diagram.

Prepared by: Rebecca Ridenour  
Date: August 19, 2008